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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,558	07/23/2003	Kenji Asuwa	500.42968X00	6635

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ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-9889

EXAMINER

CHEN, SOPHIA S

ART UNIT PAPER NUMBER

2852

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,558

Applicant(s)

ASUWA ET AL.

Examiner

Sophia S. Chen

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-10 is/are allowed.
- 6) ☒ Claim(s) 1, 11 and 12 is/are rejected.
- 7) ☒ Claim(s) 2-7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (~~PTO-1449~~ or PTO/SB/08) Paper No(s)/Mail Date 7/23/03.
- 4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “endless paper conveying belt for conveying a paper in an adsorption state and transcribing the toner image formed by said plurality of printing units onto said paper” (claim 12, lines 13-16) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of

any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because of the inclusion of legal phraseology, such as “means” (page 23, lines 8 and 12). Correction is required. See MPEP § 608.01(b).
3. The disclosure is objected to because of the following informalities:
 - a. Page 15, line 3, “Fig. 2A” should be “Fig. 2(a)”.
 - b. Page 15, line 10, “Fig. 2B” should be “Fig. 2(b)”.
 - c. Page 15, line 13, “Fig. 2A” should be “Fig. 2(a)”.
 - d. Page 16, line 10, “Fig. 4A” should be “Fig. 4(a)”.
 - e. Page 16, line 17, “Fig. 4B” should be “Fig. 4(b)”.
 - f. Page 16, line 21, “Fig. 4A” should be “Fig. 4(a)”.
 - g. Page 16, line 23, “Fig. 4A” should be “Fig. 4(a)”.

Appropriate correction is required.

Claim Objections

4. Claims 8-10 are objected to because of the following informalities:
 - a. Claim 8, line 9, “is a steering roller” should be “are steering rollers”.
 - b. Claim 8, line 10, “which is tilted” should be “which are tilted”.

Appropriate correction is required.

Claim Rejections – 35 U.S.C. §102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Poehlein (US Pat. No. 5,410,389).

The patent discloses a belt driving apparatus comprising: an endless belt 10; a plurality of belt tension supporting means 14, 16, and 17-20 for supporting the endless belt 10 in a tension manner (Figures 1 and 4); a driving means (a drive roller) 20 for driving the endless belt 10; wherein at least one of the plurality of belt tension supporting means 14, 16, and 17-20 is a steering roller 16 (column 7, lines 52-57); and wherein the belt driving apparatus is provided with a meandering compensation sensitivity adjusting means 17 and 19 for adjusting a meandering compensation sensitivity of the steering roller 16 per an angle of incline (inherently; column 8, lines 31-34; Figure 2).

Claim Rejections – 35 U.S.C. §103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asuwa et al. (US Pat. Pub. No. US 2002/0034400 A1) in view of Poehlein.

Asuwa et al. discloses an image forming apparatus provided with a plurality of printing units 1C, 1M, 1Y, 1K, each printing unit comprising: a photosensitive body 14; a charging apparatus 7; an exposure apparatus 8; a developing apparatus 9; wherein the image apparatus comprises: either an endless intermediate transfer belt 15 for conveying the toner image formed by the plurality of printing units 1C, 1M, 1Y, 1K to a transferring position onto a paper (paragraph [0064] and Figure 8) or an endless paper conveying belt for conveying a paper in an adsorption state and transcribing the toner image formed by the plurality of printing units 1C, 1M, 1Y, 1K onto the paper (paragraph [0074]); a tension supporting means 16 through 19 for supporting the intermediate transfer belt 15 or the endless paper conveying belt in a tension manner (Figure 8); and a steering roller 18.

Asuwa et al. differs from the instant claimed invention in not disclosing a meandering compensation sensitivity adjusting means.

Poehlein discloses a belt driving apparatus comprising: an endless belt 10; a plurality of belt tension supporting means 14, 16, and 17-20 (Figures 1 and 4); a steering roller 16 (column 7, lines 52-57); and wherein the belt driving apparatus is provided with a meandering compensation sensitivity adjusting means 17 and 19 for adjusting a meandering compensation sensitivity of the steering roller 16 per an angle of incline (inherently; column 8, lines 31-34; Figure 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the meandering compensation sensitivity adjusting means as taught by Poehlein to the belt of Asuwa et al. to induce minimal side forces on the belt (Poehlein; column 1, lines 4-8).

Allowable Subject Matter

10. Claims 8-10 are allowable over the prior art; however, it is found to be objectionable for the reasons specified above.

11. Claims 2-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: Claim 8 is allowable over the prior art of record because the prior art of record does not teach or suggest a belt driving apparatus comprising a meandering

compensation sensitivity being different from each other in each other in the at least two or more steering rollers.

Other Prior Art

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Asuwa et al. (US Pat. No. 6,496,672) discloses an image forming apparatus comprising an endless belt; a plurality of belt tension supporting means; and a steering roller.

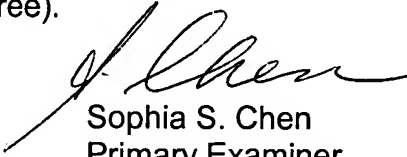
Long (EP 0 694 492 A2) discloses a belt driving apparatus comprising an endless belt; a plurality of belt tension supporting means; and a steering roller.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (703) 308-7617. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (703) 308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
July 6, 2004